AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1.   (Original)   A method for simulating by a computer drawing a dent distribution diagram of a surface processed by a shotblasting process, comprising:

a first inputting step for inputting a dent unit area, the number of dents, and an evaluation area to the computer;

a first computing step for computing a dent rate from a theoretical formula $C=100\{1-\exp(-A \cdot N/As)\}$, based on the inputted dent unit area, said inputted number of dents, and the inputted evaluation area, where

C is a dent rate (coverage) (%),

A is a dent unit area (mm^2),

N is the number of dents (piece $\cdot$ mm^2 $\cdot$ sec), and

As is an evaluation area (mm^2);

a first calculating step for calculating, based on the inputted dent unit area, said inputted number of dents, and the inputted evaluation area, a drawing dent unit area, the number of dents to be drawn, and a drawing evaluation area, that are necessary to draw a dent distribution status by a drawing device;

a second calculating step for performing calculations necessary to display in the drawing evaluation area a dent pattern of said number of dents to be drawn, each of said dents having the drawing dent unit area; and

a step for displaying or printing by the drawing device the dent rate and the result of the calculations performed by the second calculating step.

2.   (Original)   A method for simulating by a computer drawing a dent distribution diagram of a surface processed by a shotblasting process, comprising:

a dent rate inputting step for inputting a dent rate to the computer;

a dent existence ratio computing step for computing a dent existence ratio K from a theoretical formula $C = 100\{1 - \exp(-A \cdot N/As)\}$, based on the inputted dent rate, where

C is a dent rate (coverage) (%),

A is a dent unit area (mm^2),

N is the number of dents (piece $\cdot$ mm^2 $\cdot$ sec),

As is an evaluation areas (mm^2), and

K is a dent existence ratio ($A \cdot N/As$);

a second inputting step for inputting at least two of a drawing dent unit area, the number of dents to be drawn, and a drawing evaluating area to the computer;

a third calculating step for calculating, based on the computed dent existence ratio and the inputted at least two of the drawing dent unit area, said number of dents to be drawn, and the drawing evaluation area, a drawing dent unit area, the number of dents to be drawn, and a drawing evaluation area, that are necessary to draw a dent distribution status by a drawing device;

a fourth calculating step for performing calculations necessary to display in the drawing evaluation area a dent pattern of said number of dents to be drawn, each of said dents having the drawing dent unit area; and

a step for displaying or printing by the drawing device the dent rate and the results of the calculations performed by the second calculating step.

3.   (Currently amended)   A method for simulating by a computer drawing a dent distribution diagram of a surface processed by a shotblasting process, comprising:

a third inputting step for inputting a shotblast processing condition to the computer;

a dent unit area computing step for computing a dent unit area from empirical formulas A= π [[D2/4]] $\underline{D^2/4}$ and D=k1 · d · {1-exp(k2 · HVa/HVw)}/{1-exp(k3 · V)}, based on the inputted shotblast processing condition, where

k1, k2, and k3 are coefficients (having dimensions),

A is a dent unit area (mm^2),

D is the diameter (mm) of a dent,

HVa is the hardness (HV) of the projection material,

d is the size (mm) of the particles of the projection material,

v is a projection speed (m/sec), and

HVw is the hardness (HV) of a product to be processed;

a dent number computing step for computing the number of dents from an empirical formula N=k4 · M/(ρ · [[d3/6]] $\underline{d^3/6}$· π) · (t/60) · As, based on the inputted shotblast processing condition, where

k4 is a coefficient (having dimensions),

N is the number of dents (piece · mm^2 · sec),

M is a projected amount (kg/min) of the projection material,

t is a processing time (sec),

F is the density (g/cm^3) of the projection material,

As is an evaluation area (mm^2);

-14-

a second dent rate computing step for computing a dent rate from a theoretical

formula C=100{1-exp(-A · N/As)}, based on the computed dent unit area, said number of

dents, and an evaluation area arbitrarily set, where

C is a dent rate (%) (coverage),

A is a dent unit area (mm^2),

N is the number of dents (piece · mm^2 · sec),

As is an evaluation area (mm^2);

a fifth calculating step for calculating a drawing dent unit area, the number of

dents to be drawn, a drawing evaluating area, that are necessary to display a dent

distribution status by a drawing device, based on the computed dent unit area and said

computed number of dents, and an evaluation area arbitrarily set;

a sixth calculating step for performing calculations necessary to display in the

drawing evaluation area a dent pattern of said number of dents to be drawn, each of

said dents having the drawing dent unit area; and

a step for displaying or printing by the drawing device the dent rate and the

results of the calculations performed by the sixth step.

4.   (Original)   A system for simulating by a computer drawing a dent

distribution diagram of a surface processed by a shotblasting process, comprising:

a first inputting means for inputting a dent unit area, the number of dents, and an

evaluation area;

a first dent rate computing means for computing a dent rate from a theoretical

formula C=100{1-exp(-A · N/As)}, based on the inputted dent unit area, said inputted

number of dents, and the inputted evaluation area;

a first calculating means for calculating a drawing dent unit area, the number of dents to be drawn, and a drawing evaluation area, that are necessary to display a dent distribution status by a drawing device, based on the inputted dent unit area, said inputted number of dents, and the inputted evaluation area;

a second calculating means for performing calculations necessary to display in the drawing evaluation area a dent pattern of said number of dents to be drawn, each of said dents having the drawing dent unit area; and

a first drawing device for displaying or a first printing means for printing the dent rate and the results of the calculations performed by the second calculating means.

5.   (Original)   A system for simulating by a computer drawing a dent distribution diagram of a surface processed by a shotblasting process, comprising:

a dent rate inputting means for inputting a dent rate;

a dent existence ratio computing means for computing a dent existence ratio from a theoretical formula $C=100\{1-\exp(-A \cdot N/As)\}$, based on the inputted dent rate;

a second inputting means for inputting at least two of a drawing dent unit area, the number of dents to be drawn, and a drawing evaluation area;

a third calculating means for calculating a drawing dent unit area, the number of dents to be drawn, and a drawing evaluation area, that are necessary to display a dent distribution status by a drawing device, based on the computed dent existence ratio and said inputted at least two of the drawing dent unit area, said number of dents to be drawn, and the drawing evaluation area;

a fourth calculating means for performing calculations necessary to display in the drawing evaluation area a dent pattern of said number of dents to be drawn, each of said dents having the drawing dent unit area; and

a second drawing device for displaying or a second printing means for printing the dent rate and the results of the calculations performed by the fourth calculating means.

6.   (Currently amended)   A system for simulating by a computer drawing a dent distribution diagram of a surface processed by a shotblasting process, comprising:

a third inputting means for inputting a shotblast processing condition;

a dent unit area computing means for computing a dent unit area from empirical formulas A= π [[D2/4]] $\underline{D^2/4}$ and D=k1 · d · {1-exp(k2 · HVa/HVw)}/{1-exp(k3 · V)}, based on the inputted shotblast processing condition;

a number of dents computing means for computing the number of dents from an empirical formula N=k4 · M/(ρ · [[d3/6]] $\underline{d^3/6}$ · π) · (t/60) · As;

a second dent rate computing means for computing a dent rate from a theoretical equation C=100{1-exp(-A · N/As)}, based on the computed dent unit area, said computed number of dents, and an evaluation area arbitrarily set;

a fifth calculating means for calculating a drawing dent unit area, the number of dents to be drawn, and a drawing evaluation area, that are necessary to display a dent distribution status by a drawing device, based on the computed dent unit area, said computed number of dents, and the evaluation area arbitrarily set;

-17-

a sixth calculating means for performing calculations necessary to display in the drawing evaluation area a dent pattern of said number of dents, each of said dents having the dent unit area; and

a third drawing device for displaying or a third printing means for printing the dent rate and the results of calculations performed by the sixth calculating means.

7-17. (Cancelled).